Claims

What is claimed is:

[c1] A virtual attribute service in a directory server, comprising:

an attribute value associated with an entry;

a virtual attribute service provider; and

an interface using the virtual attribute service provider to generate the attribute value associated with the entry.

[c2] The virtual attribute service of claim 1, wherein the attribute value is not physically contained within the entry.

[c3] The virtual attribute service of claim 1, wherein the virtual attribute service provider comprises a role service.

[c4] The virtual attribute service of claim 1, wherein the virtual attribute service provider comprises a class of service.

[c5] The virtual attribute service of claim 1, wherein the virtual attribute service provider is implemented as a plugin to the directory server.

[c6] A method of generating a value of a virtual attribute, comprising:

calling a virtual attribute service by an executable application; and

consulting a virtual attribute service provider within a common interface of the virtual attribute service;

wherein the value of the virtual attribute is generated by the virtual service provider accessed by the common interface.

[c7] The method of claim 6, further comprising:

using a memory cache to store the value of the virtual attribute.

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[c8]   The method of claim 6, further comprising:

maintaining a count for a number of times a query passes through the common interface; and

flagging an error and aborting the execution of the virtual attribute service if the count exceeds a threshold number.

[c9]   The method of claim 6, further comprising:

checking a configuration change within a service provider against the configuration of all service providers;

determining whether a cycle is created; and

flagging an error and aborting the execution of the virtual attribute service if a cycle is created.

[c10]   The method of claim 6, wherein the virtual attribute service provider comprises a role service.

[c11]   The method of claim 6, wherein the virtual attribute service provider comprises a class of service.

[c12]   The method of claim 6, wherein the virtual attribute service provider is implemented as a plugin to the directory server.

[c13]   A method of generating a value of a virtual attribute, comprising:

calling a virtual attribute service by an executable application;

consulting a virtual attribute service provider within a common interface of the virtual attribute service;

using a memory cache to store the value of the virtual attribute;

maintaining a count for the number of times a query passes through the common interface;

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flagging an error and aborting the execution of the virtual attribute service if the count exceeds a threshold number;

checking a configuration change within a service provider against the configuration of all service providers;

determining whether a cycle is created; and

flagging an error and aborting the execution of the virtual attribute service if a cycle is created;

wherein the value of the virtual attribute is generated by the virtual service provider accessed by the common interface.

[c14] A class of service in a directory server, comprising:

a definition entry identifying a type of class of service; and

a dynamic template entry storing a list of the shared attribute values;

wherein the definition entry and the dynamic template entry interact to provide an attribute value to a target entry.

[c15] The class of service of claim 14, wherein the definition entry is stored as a subentry in a directory information tree below a branch at which the class of service is effective.

[c16] The class of service of claim 14, wherein the target entry comprises an entry pointing to the class of service.

[c17] The class of service of claim 14, wherein changes to the attribute value of the dynamic template entry are applied to all entries sharing the attribute value.

[c18]   A method for generating an attribute value of a class of service in a directory server, comprising:

identifying a dynamic template entry by a distinguished name;

adding a specific attribute to the dynamic template entry; and

generating the attribute value of the dynamic template entry while a client application is accessing the directory server.

[c19]   The method of claim 18, wherein the specific attribute is a cosPointerDefinition object class.

[c20]   A method for generating an attribute value of a class of service in a directory server, comprising:

identifying a dynamic template entry by an attribute value of a target entry;

adding a specific attribute to the dynamic template entry; and

generating an attribute value of the dynamic template entry while a client application is accessing the directory server.

[c21]   The method of claim 20, wherein the specific attribute is a cosIndirectDefinition object class.

[c22]   A method for generating an attribute value of a class of service in a directory server, comprising:

identifying a dynamic template entry by a distinguished name and an attribute value of a target entry;

adding a specific attribute to the dynamic template entry; and

generating an attribute value of the dynamic template entry while a client application is accessing the directory server.

[c23]   The method of claim 22, wherein the specific attribute is a cosClassicDefinition object class.

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[c24]   An apparatus for generating a value of a virtual attribute, comprising:

means for calling a virtual attribute service by an executable application; and

means for consulting a virtual attribute service provider within a common interface of the virtual attribute service;

wherein the value of the virtual attribute is generated by the virtual service provider accessed by the common interface.